

North Carolina DEPARTMENT OF TRANSPORTATION

NCDOT Rail Division

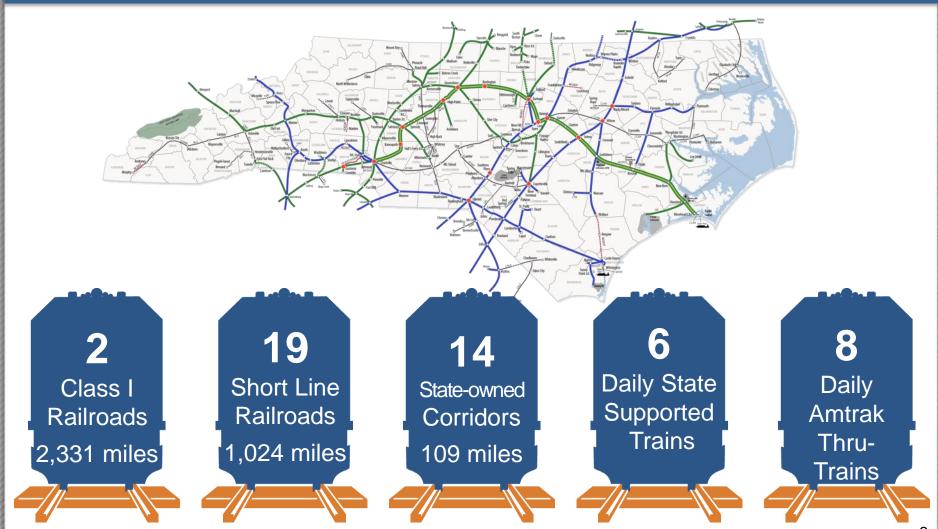
Joint Legislative Transportation Oversight Committee March 24, 2015

Paul C. Worley, CPM Rail Director

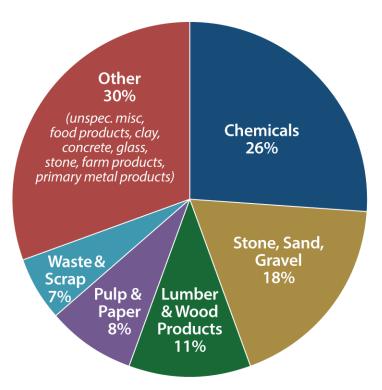




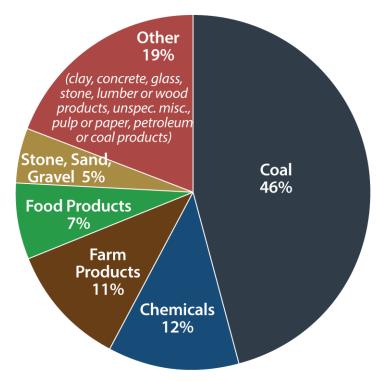
Railroads Operate in 86 of 100 Counties



Freight Rail Traffic



Originated in NC 10.4 million tons/204,200 carloads



Terminated in NC 47.9 million tons/591,200 carloads

Train Economics

- One train can carry as much freight as several hundred trucks
- Reduces long-distance truck volumes on highways
- 75% of trips are more than 440 miles in distance and heavy loads

+ 4.6 Million

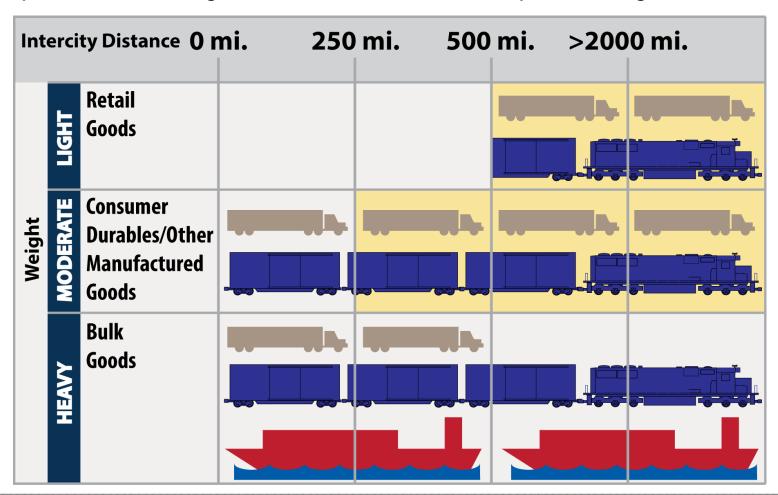
additional trucks to handle the
82 Million Tons of freight

that originate in, terminate in or moved through North Carolina by rail each year.

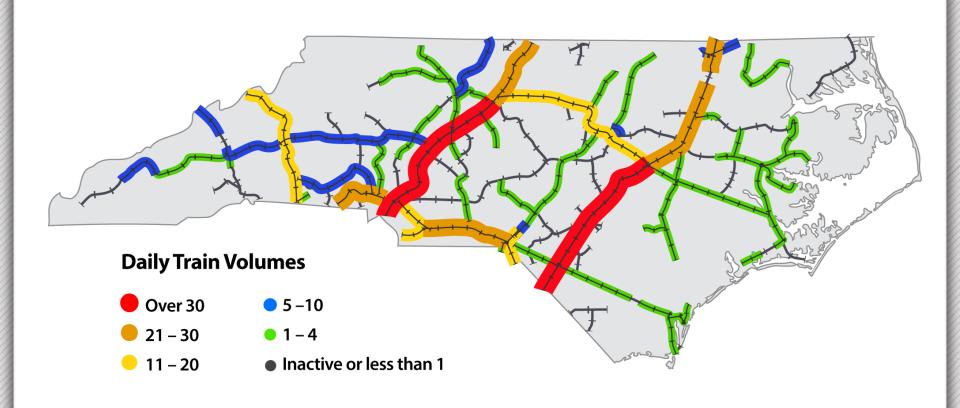


The Role of Rail

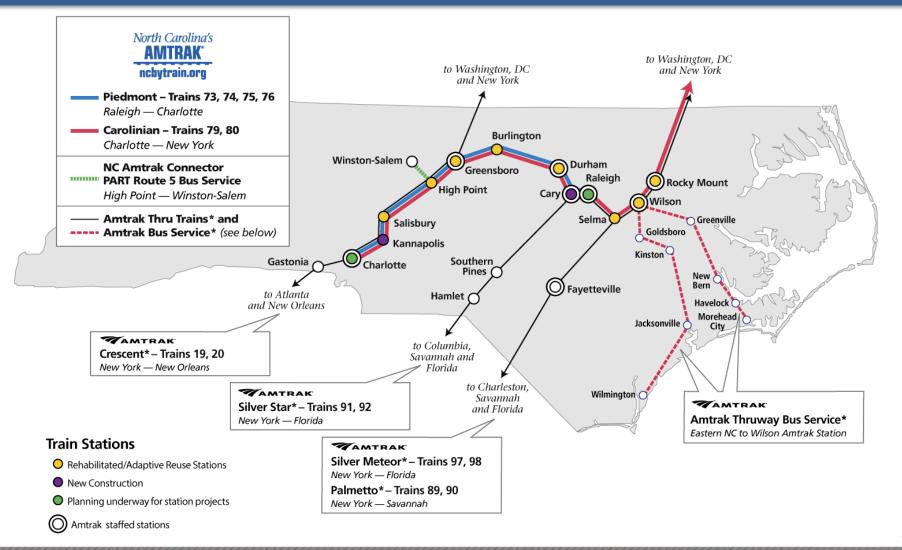
The potential advantage of different modes with respect to weight and distance



2014 Train Volumes in North Carolina



Current Passenger Rail Services



Economic Impact of Rail in North Carolina

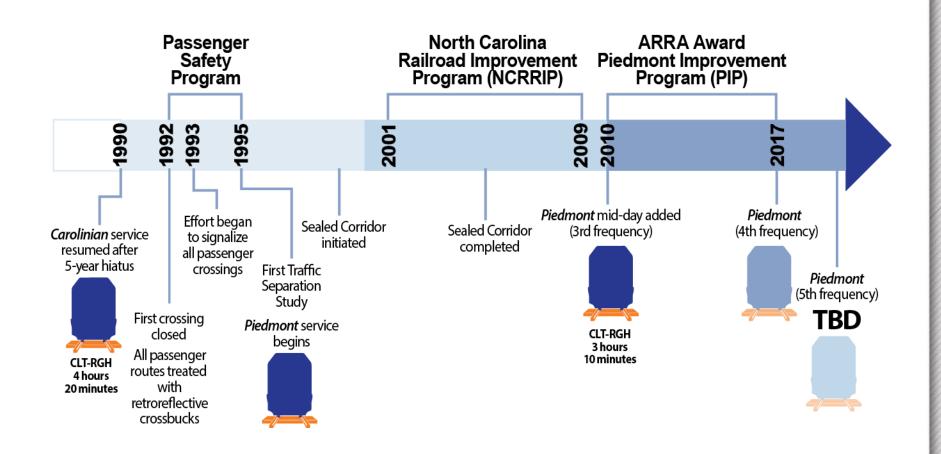
Railroad Direct Economic Impacts for Freight and Passenger Rail in North Carolina

	Freight (2014 Dollars)*	Passenger (2014 Dollars)*
User Cost Savings (Shipper)	\$1,496M	-
Amtrak Wages and Purchases	-	\$89M
Tourist Spending	-	** \$2M
GSMR Direct Wages and Purchases		\$6M
GSMR Tourist Direct Spencing		\$16M
Pavement Savings	\$96M	\$4M
Congestion Savings	\$162M	\$4M
Total	\$1,754M	\$121M

^{*}Tourist spending, pavement savings, congestion savings, auto emissions, and safety for passenger rail are based on trips to NC that would not have been made without rail.



NCDOT Rail Improvements History





NCDOT Rail Corridors – 109 miles preserved

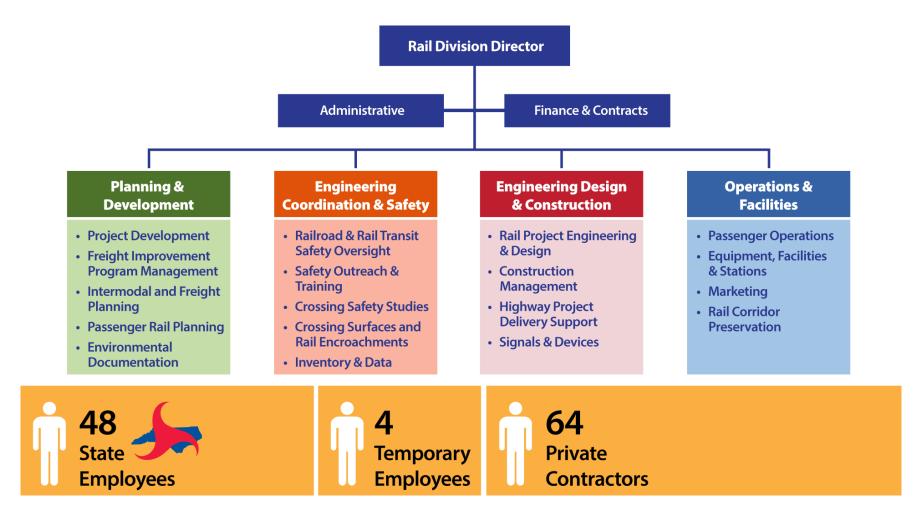
Corridor	Location	Date acquired	Length (miles)	Cost	Status
1. Murphy Branch	Andrews to Murphy	7-18-88	14.23	\$650,000	Rail Banked
2. Franklin County	Franklinton to Louisburg	11-2-90	9.6	\$162,108	Rail Banked
Piedmont & Northern (Charlotte)	Charlotte	11-27-91	0.77	\$186,000	Trail Lease
 Piedmont & Northern (Mt. Holly) 	Mt. Holly to Gastonia & Belmont	12-5-91	11.6 (main) 3.0 (spur)	\$483,221	Operating Lease
5. Maiden Branch	S. Newton to Lincoln Co. line	4-13-93	6.3	\$130,000	Rail Banked
6. Wilmington & Weldon	Wallace to Castle Hayne	8-4-94	27.1	-	Rail Banked
7. Durham & South Carolina	Durham to NC 54	8-18-95	5.07 (main) 3.07 (spur)	\$1	Trail Lease & Rail Banked
8. Durham & South Carolina	Chatham-Wake Co. line to New Hill	8-18-95	7.35	\$1	Trail Lease & Rail Banked
9. Lincolnton (C&NW)	Lincolnton	1-27-97	0.61	\$10	Rail Banked
10. Durham & South Carolina	Fayetteville Street to Chatham-Wake Co. line	8-6-98	6.34	\$425,000	Trail Lease
11. Wilmington Lead	Fourth Street to McRae Stree	t 6-12-02	.25	\$100,000	Rail Banked
12. Nash County Railroad	Momeyer to Spring Hope	11-02-05	4.3	\$10	Rail Banked
13. Winston-Salem R-Line	Downtown Winston-Salem	2-26-06	2.0	\$2,686,276	Trail Lease & Rail Banked
14. Global TransPark Spur	Kinston	9-30-12	5.7	-	Soliciting Lease

NCDOT Corridor Activity

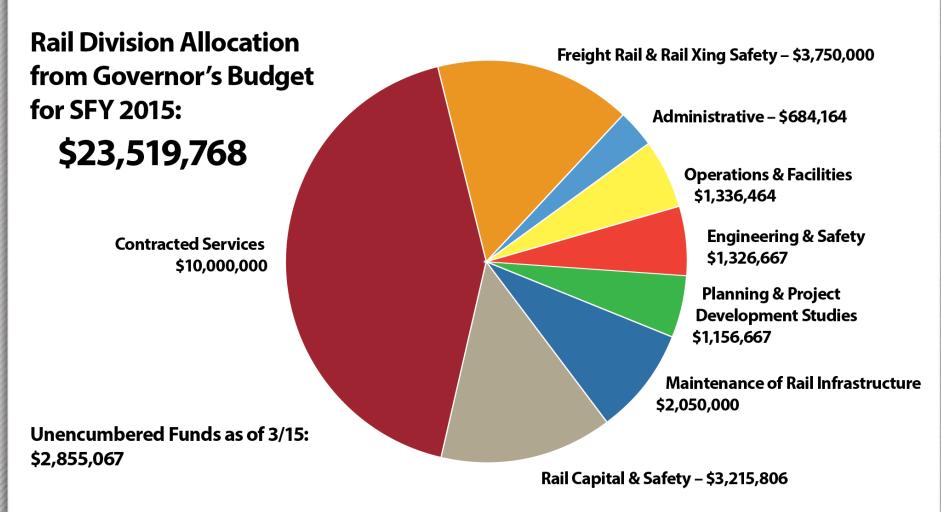
- **Piedmont & Northern** Gastonia to Mount Holly, resumed operation February 2012, preliminary negotiations underway with new operator
- Andrews to Murphy Line Study complete, strong local interest in track/service restoration
- Global TransPark Spur Evaluating lease options
- Wallace to Castle Hayne Line –
 Department of Defense interested in restoration
- S- and SA-Line Preservation for future Southeast Corridor connecting North Carolina to Northeast Corridor



NCDOT Rail Division Functions

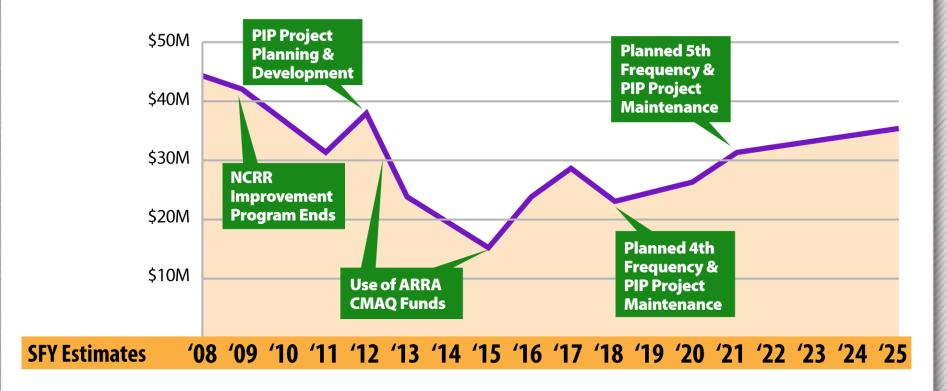


Rail Division – State Funding



O&M History and Future Estimates

Operations and Maintenance



Plan Draft Recommendations – Freight

- Safety improvements along Investment Tier corridors (heavy freight traffic and serving our ports)
- Capacity improvements at/near intermodal terminals
- Evaluate competitive intermodal service to Eastern NC and the Triangle, considering agriculture, cold storage and manufacturing
- Study railroad bypasses of New Bern and Morehead City
- Seek partnerships for restoration of Wallace-Castle Hayne segment (Port of Wilmington)
- Study market needs for hydraulic fracturing
- Serve emerging markets (wood pellets)
- Preserve corridors







Freight Program - Funding Needs and Sources

	Funding Needs By Time Period		
Short Line Projects and Needs (Based on 11 short line survey responses) – Eligible for Funding by FRRCSI	0-5 Years	6-10 Years	11-20 Years
Bridges	\$3,524,000	\$3,200,000	\$21,692,000
Rail	\$4,838,000	\$11,413,000	\$27,600,000
Ties and Surfacing	\$13,834,000	\$14,072,000	\$29,544,000
Additional Capacity	\$15,500,000	\$4,650,000	\$1,300,000
Rail Yards	\$1,100,000	\$1,600,000	-
Transloads	\$2,360,000	\$500,000	-
Other Needs	\$2 <mark>,37</mark> 0,000	\$1,135,000	\$2,070,000
Other Short Line Projects		B.	
Relocate ACWR (Mecklenburg County)	X II)	\$16 <mark>,500,000</mark>	
Front Street Lead Track Signals and Gates (New Hanover County)*	\$900,000		
Andrews to Murphy Reactivation (Cherokee County)	10 量点	\$16,400,000	
Grade Separations and Port of Wilmington Gates (New Hanover Co.)*	\$50,000,000	X	
Total – Short line Project Needs	\$94,426,000	\$69,470,000	\$82,206,000

^{*} If identified by a Traffic Separation Study, could potentially be funded by grade separation funds Y-5500



Freight Program – Funding Needs and Sources

Class I Projects and Needs – Funded / Identified by STI/SMF P3.0	0-5 Years
New Norfolk Southern TBT (Bulk Terminal) Facility in Charlotte	\$976,000
Container parking / storage adjacent to Norfolk Southern's Greensboro Intermodal Facility (converts former Roundhouse property)	\$1,695,000
CSXT - 10,000 foot siding extension at Stouts in Union County. Creates passing siding on segment of single track that benefits general freight and intermodal traffic	\$10,600,000
Upgrade NS rail line paralleling US 52 in Albemarle (Stanly County) to allow for freight	\$2,126,000
Subtotal	\$15,397,000
Funded by State	\$8,549,000
Funded by CSXT	\$5,300,000
Funded by NS	\$1,549,000
	XXX
Additional Near, Mid, and Long-term Class I freight rail projects: (2015-2040) track improvements/new access, intermodal and rail yard improvements, crossing safety and grade separations, corridor preservation and energy development support.	\$1.1B

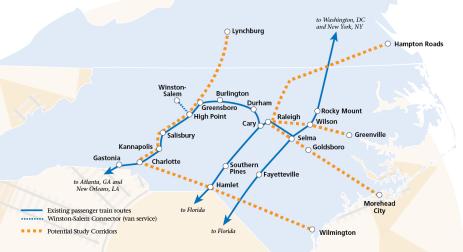
Plan Draft Recommendations – Passenger

Southeast Corridor

- Implement 4th and 5th frequencies
- Add stops, increase speeds, and improve travel times (esp. Greensboro to Raleigh)
- Construct multimodal stations Charlotte & Raleigh
- Secure S-Line corridor and complete service planning

New Markets

- Utilize Thruway bus services to grow markets/ridership
- Incrementally develop WNC and SENC service
- Conduct studies for future market connections





Passenger Program – Funding Needs and Sources

Program	Funding Needs	Funding Sources	Timeframe
Southeast Corridor – Fourth and Fifth Frequencies			
Wi-Fi on <i>Piedmont</i>	\$567,000	State O&M, Amenities Charge	2015-2016
Implement Positive Train Control (PTC) (8 locomotives, 5 CCU, 4 spares)	\$2,125,000	State O&M	2015
Ongoing maintenance for PTC	\$150,000/yr.	State O&M	2016-future
Hillsborough Station and track improvements	\$8,400,000	STI/ Other (TTA), Local	2018
5 th Frequency – Expansion of Capital Yard; new equipment (loco, CCU, lounge, coach)	\$35,400,000	Federal, STI	2019
Southeast Corridor - Service Improvements, Piedmont C	Corridor		
New Stations at Lexington, Harrisburg, associated track upgrades to class 5 (90 MPH), station improvements	\$237,400,000	Federal, STI, Local	2022-2035
Charlotte Gateway Station (and associated track improvements)	\$210,000,000	Public-Private Partnership, FTA grant, Federal, STI, Local funds	2020-2030
Southeast Corridor – Full Implementation			
Full Southeast Corridor Implementation (Charlotte-Greensboro-Raleigh-Richmond)	\$4,451,000,000	Fe <mark>deral, STI, Public-Private Partnerships</mark>	2025-2030
Carolinian Improvements			
New equipment to replace existing Carolinian trainsets	\$76,600,000	F <mark>ederal, STI, Amtrak</mark>	2020
Eastern North Carolina Service			
Station improvements (Fayetteville, Wilson, Selma) to accommodate growing ridership	\$2,5 <mark>00,000</mark>	Federal, STI	2018-2025
Potential Connecting Services			
Western NC Passenger Service (Salisbury to Asheville)	TBD	Federal, STI, O&M, Local	2018 (Thruway Bus Service) 2035 (Rail)
Southeastern NC Passenger Service (Raleigh to Wilmington)(Amtrak currently provides Thruway Bus service between Wilson and Wilmington)	TBD	Federal, STI, Local	203 <mark>5 (Rail</mark>)





PIP Funding & Service Requirements





2009 – NCDOT was awarded \$546.5M in FRA grants for a series of rail projects along the Piedmont Corridor between Charlotte and Raleigh and Congestion Mitigation projects north of Rocky Mount on CSX.

Cooperative Agreement – Defines NCDOT's requirements:

- Continue the 3rd frequency
- Introduce 4th frequency
- Complete and maintain improvements

(Modeling verified capacity that includes 4th and 5th)



PIP Components



- 5 Station Improvement Projects
- 2 Locomotive & Rail Car Maintenance Facility Projects
- North Carolina's Amtrak Equipment-coaches, locomotives, cab control units
- 12 Grade Separations
- 24 Public Crossing Closures
- 16 Private Crossing Closures
- 2 Passing Sidings
- 3 Double Track Projects
- Curve Realignments
- Highway Improvements



Projects Benefit Passenger & Freight



Benefits include:

- Make railroads safer for all trains and motorists by eliminating at-grade crossings
- Modernize the railroad
- Improve capacity, operations and reliability
- Reduction in both highway and train delays

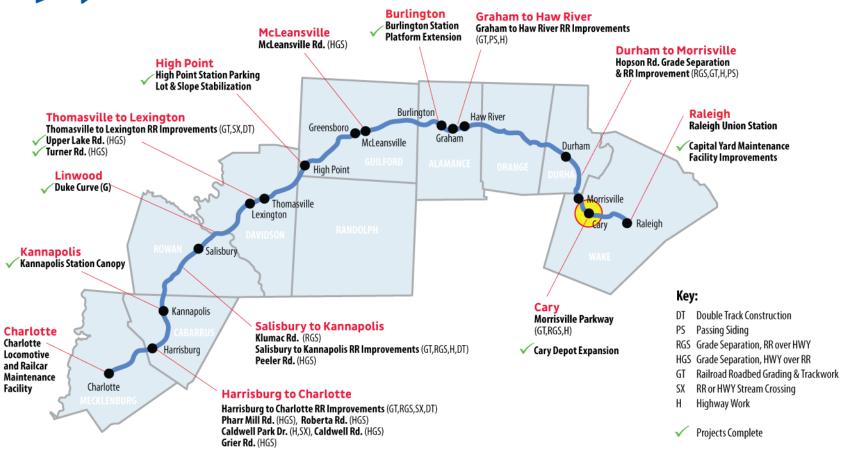


ARRA Spending to Date



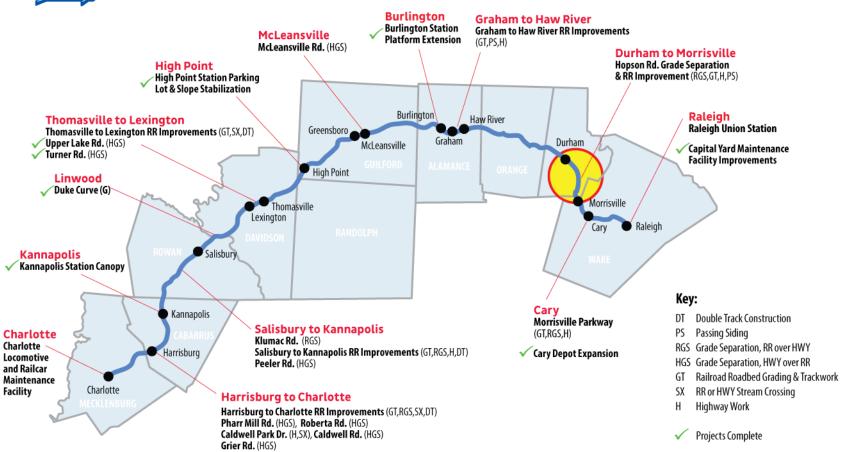
	Funding	Expended	Commitments
Equipment	\$32.7M	\$26.3M	\$0.6M
Stations/Facilities	\$75.3M	\$10.9M	\$9.3M
PDA/ROW	\$63.7M	\$44.7M	\$4.6M
Track/Structures	\$345.6M	\$149.9M	\$181.8M
CRISP	\$2.7M	\$2.2M	
Subtotal:	\$520.0M	\$234.0M	\$196.4M
Congestion Mitigation	\$26.5M	\$1.7M	\$14.3M
Total:	\$545.6M	\$235.7M	\$210.7
*To date FRA has reimbursed \$219.3M.			







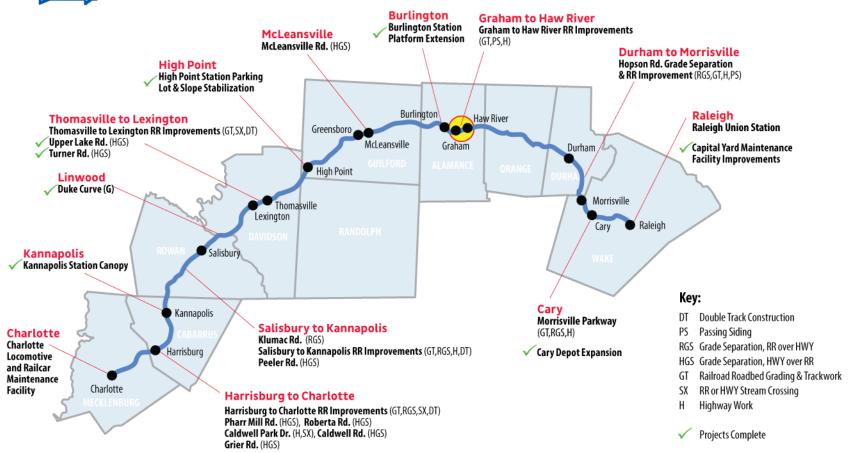






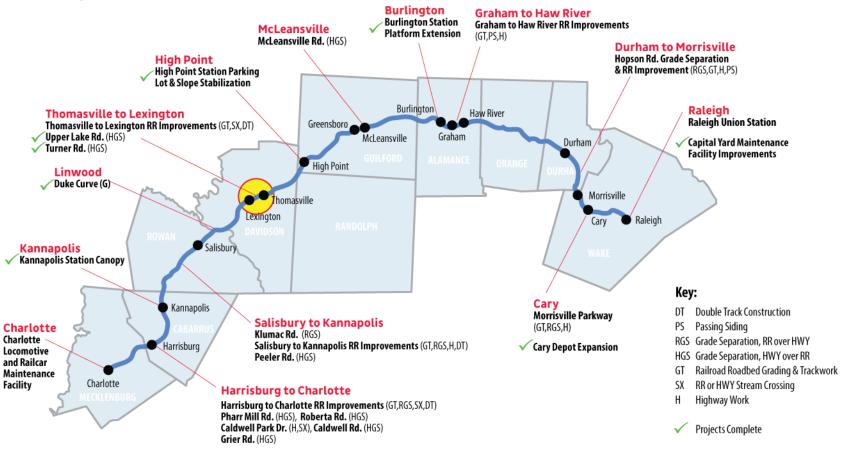














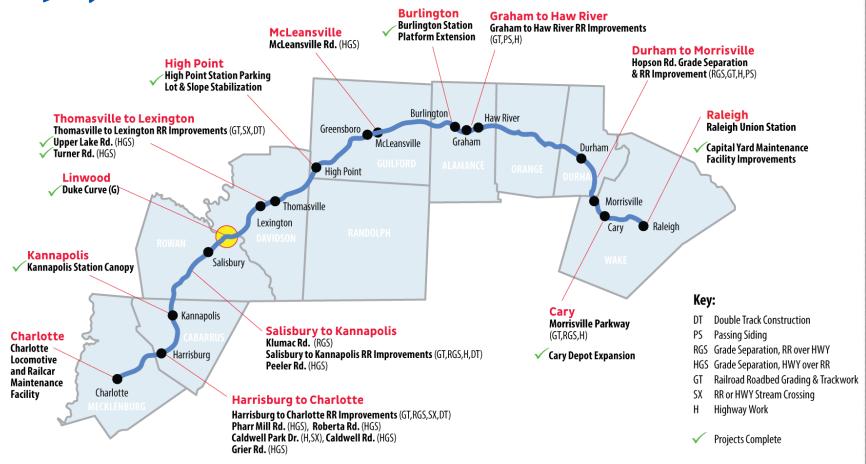








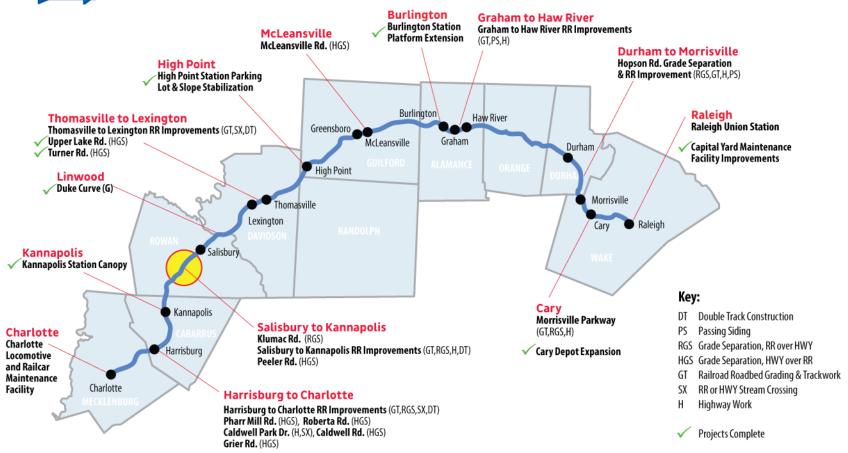
Piedmont Improvement Program Projects







Piedmont Improvement Program Projects





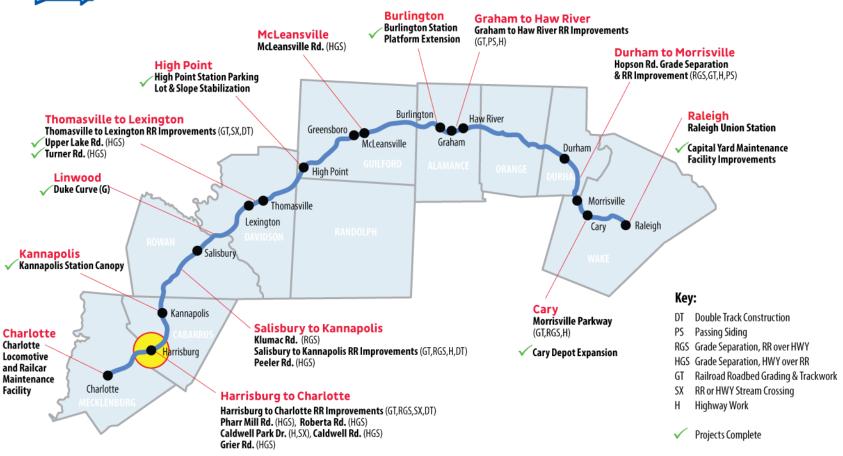








Piedmont Improvement Program Projects





P-5208 Caldwell Road Bridge Construction, Harrisburg KOMAT'SU 2013/12/07













Freight Rail & Rail Crossing Safety Improvement Fund

Established 2013 under NCGS §124-5.1 and funded by annual NCRR cash dividends

\$22.95m allocated to date

- \$19.2M SFY 2014
- \$3.75M SFY 2015

Program goals:

- Make North Carolina's railroads safer
- Meet the needs of existing rail customers
- Address needs of prospective rail customers
- Build to meet the needs of future rail customers in small urban and rural areas





State Grant Programs – FRRCSI Funded

Short Line Infrastructure Assistance Program (SIAP)

- Traditionally funded by annual state legislative allocation
- Previous annual allocations have ranged from \$0 to \$2 million
- FR&RCSI is the source of funding in FY14 & FY15

Rail Industrial Access Program (RIAP)

- Traditionally funded by annual state legislative allocation
- Previous annual allocations have ranged from \$119k to \$1 million
- Provides funds for construction of rail spurs to allow industries new or expanded rail access
- Bringing jobs to people
- Diverting freight from highways to rail



Project Categories & Needs

Funds allocated statewide by NCDOT to projects based on:

- -Eligibility
- -Needs
- Prioritization methodologies



- Short Line
 Infrastructure
 Assistance
- Class I Infrastructure Projects
- Federal GrantMatching Funds

Grade Crossing
Protection, Elimination
& Signalization
Improvements

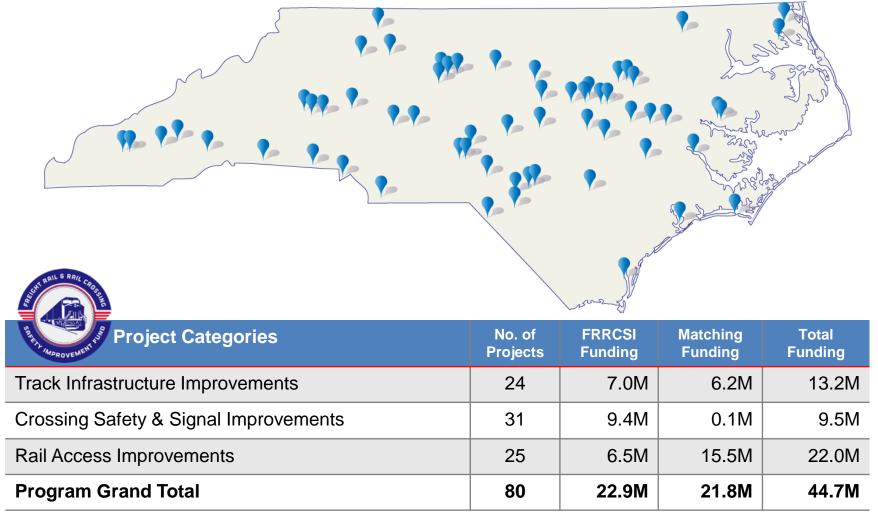
- Closures
- Corridors
- Signals
- Signage
- Surfaces



Rail Access Improvements

- Discretionary Grant Matching Funds
- Rail Industrial Access
- Military
- Ports
- Industry

FRRCSI Projects – 2014-2015





2014/2015 Fund Allocations

Project Categories	Project Type	FRRCSI Funding	Railroad Match	Total Investment
Track Infrastructure Improvements	Economic Development	0.8M	-	0.8M
	Short Line	6.1M	6.2M	12.3M
	Management	0.2M	-	0.2M
Crossing Safety & Signal Improvements	Closure	3.2M	-	3.2M
	Corridor	1.6M	-	1.6M
	Crossing Assistance	3.9M	-	3.9M
	Crossing Surface	0.8M	0.1M	0.9M
	Management	0.1M	-	0.1M
Rail Access Improvements	Industrial Access	1.2M	3.8M	5.0M
	Military/Port/Industry	5.0M	11.7M	16.7M
	Management	0.4M	_	0.4M
Program Grand Total		22.9M	21.8M	44.7M



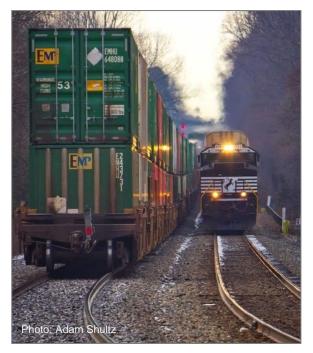
2015 Funding Utilization

Project Categories	Project Type
Track Infrastructure Improvements	\$2.83 million to fund 11 projects that will improve short line railroads by adding capacity, increasing operating efficiency and enhancing safety on these critical rural development corridors
Crossing Safety & Signal Improvements	\$500,000 to fund two projects which will modernize rail crossing signals and improve safety – 8 crossings will be closed to improve safety for trains and vehicles
Rail Access Improvements	\$411,000 to fund two projects that will improve rail access for new and existing businesses and enhance the ability to move freight via the rail network

Future FRRCSI Needs

- Bridges: Many on light density lines need upgrading to 286K standards for today's railcars
- New bulk or intermodal terminals:
 Build or support
- Rail Plan identifies \$43,526,000*
 need over next 5 years







FRRCSI Gaps in Eligibility

- STI does not lend itself to funding intermodal projects
- FRRCSI funds help to fill that gap, but not completely

Example: Great Smoky Mountains Railroad

- Since the GSMR does not provide freight service, they do not qualify under FRRCSI.
- SIAP improvements are funded through FRRCSI.









Passenger Rail Investment & Improvement Act of 2008 (PRIIA) Section 209

Intent of Section 209 Legislation: establish pricing methodology for governing state payments to Amtrak for services provided

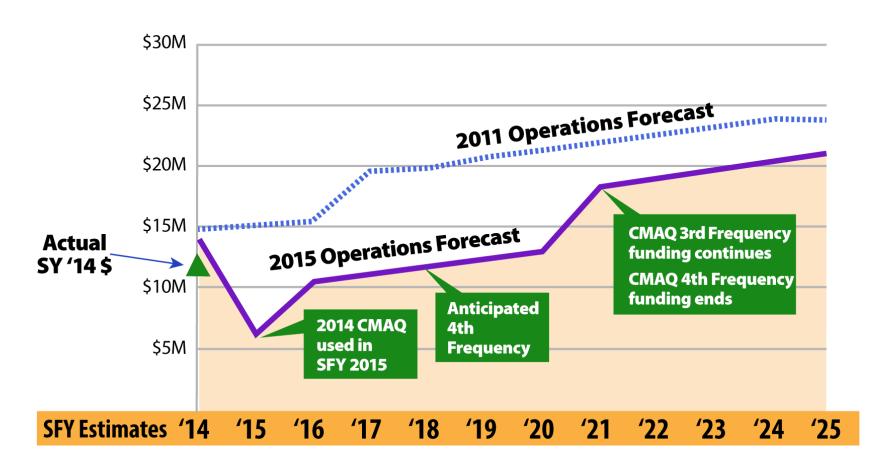
- State payments have increased
- Includes direct, shared and equipment capital costs, with credit provided for passenger revenue

Section 209 impact on NC: Cost increase of \$2.9M

	FFY 2012	FFY2014	Percent Change
Net Payment	\$4.29M	\$6.46M	50%

Operations Funding Forecast

Operations Funding Forecast



CMAQ Funding Timeline

CMAQ used to support 3rd Frequency *Piedmont* Operations

As per federal law, funding will continue indefinitely

Additional CMAQ funds used to support Marketing FFY15-16

Anticipate being able to continue beyond FFY16

CMAQ funds for 4th Frequency *Piedmont*

 Only eligible for first 3 years of operation (FFY 2018)



Piedmont Route Performance

December 2014 Customer Satisfaction Rating

91%

		Projected	
	SFY2014	SFY2015	SFY2016
Passenger Revenue	\$3,413,423	\$3,558,957	\$3,665,700
CMAQ	\$0	**\$7,500,000	\$3,750,000
State Rail Funds (Budgeted)	\$10,488,136	\$3,801,288	\$7,772,685
Total Revenue	\$13,901,559	\$14,860,245	\$15,188,385
Amtrak	\$6,646,349	\$6,916.502	\$6,985,667
Fuel	\$1,265,414	\$1,223,291	\$1,259,990
Mechanical	\$3,149,846	\$3,201,739	\$3,297,791
Insurance	\$1,143,833	\$1,236,000	\$1,273,080
Total Direct Expense	\$12,205,442	\$12,577,532	\$12,816,528
Passenger Program Overhead & Contingency*	\$1,696,116	\$2,282,713	\$2,371,857
Total Direct & Overhead Expense w/Contingency	\$13,901,559	\$14,860,245	\$15,188,385
Fare Box Recovery Ratio	28%	28%	29%
Number of Passengers	169,900	173,100	*174,500

^{*}Includes Station & Facility Rent, NCDOT Station Attendant Program, NS Maintenance Payments and Administrative **FFY 14 and 15 CMAQ

^{***} Ridership forecast is conservative due to construction delays and train annulments during PIP construction

Carolinian Route Performance

December 2014 Customer Satisfaction Rating

83%

		Projected	
	SFY2014	SFY2015	SFY2016
Passenger Revenue	\$16,344,841	\$16,501,881	\$16,666,900
CMAQ*	\$0	\$0	\$0
State Rail Funds (Budgeted)	\$2,953,943	\$3,960,295	\$4,033,056
Total Revenue	\$19,298,783	\$20,462,176	\$20,699,956
Amtrak	\$18,450,725	\$19,320,819	\$19,514,028
Total Direct Expense	\$18,450,725	\$19,320,819	\$19,514,028
Passenger Program Overhead & Contingency**	\$848,058	\$1,141,357	\$1,185,928
Total Direct & Overhead Expense w/Contingency	\$19,298,783	\$20,462,176	\$20,699,956
Fare Box Recovery Ratio***	89%	85%	85%
Passengers	303,300	315,300	*315,800

^{*}Not eligible for CMAQ

^{**}Includes Station & Facility Rent, NCDOT Station Attendant Program, NS Maintenance Payments and Administrative

^{***}Fare Box Recovery Ratio excludes Amtrak Equipment Capital Charge

^{****} Ridership forecast is conservative due to construction delays and train annulments during PIP construction

Implemented Cost Reductions and Enhancements

\$676.15K SFY2014 Savings **Shift to non-Rail Funding Sources**

\$296K

Winston-Salem Connector Bus Service \$44K

High Point & Salisbury Station Attendants **Fare Strategies**

\$175K

Market Pricing to Increase Revenue

Restructure Services

\$40K

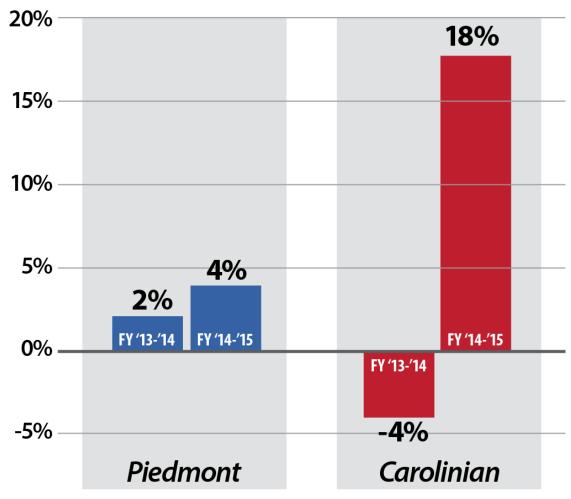
NCBYTRAIN Call Center \$1.15K

Amenities on Piedmont **Fuel Adjustment**

\$120K

Fuel Consumption Adjustment on Carolinian

Implemented Market Pricing Impacts



FY'13-'14 compares year to year. FY'14-'15 compares Q1 '14 to Q1'15

Reducing Costs & Generating Revenue

Near Term-1 year:

Ongoing Fare Strategies based on new market research:

- Have increased revenue 11% and ridership 4% efforts continue
- Onboard and General Public Survey conducted Spring and Fall 2014
- General Awareness Survey underway
- Results are driving marketing efforts and fare strategy

Amenities Fee:

Will be raised by 50¢ to \$1 to cover new Wi-Fi coming in May – +\$35K

Reservations & Ticketing Efficiency:

- Evaluating measures to reduce usage of Amtrak call center services, and increase interactive self-serve ticketing
- Gained direct access to Amtrak Fare & Seat Inventory Management System

Generate Revenue:

Sponsorships and business opportunities, requires legislation

Reducing Costs & Generating Revenue

Mid Term-2-3 years:

Station Staffing and Onboard/Crew base efficiencies:

- Now being scoped
- Potential savings of \$500k+
- Value of offering reserved seating vs. unreserved seating

Completion of Raleigh Union Station

Completion of PIP improves reliability



Reducing Costs & Generating Revenue

Long Term–2017 and beyond:

Completion of Charlotte Gateway Station

Grow Ridership:

- Additional Station stops at Harrisburg, Lexington and Hillsborough
- Feeder services, connectivity

Station Efficiencies:

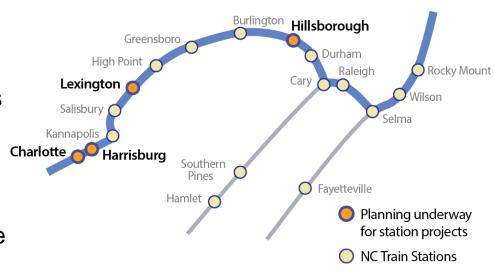
- Staffing
- Expand local support of stations

Equipment and Facilities

Continue to pursue efficiencies

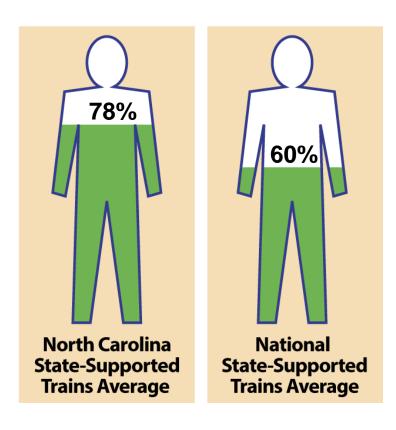
Service Procurement:

· Investigate options to streamline

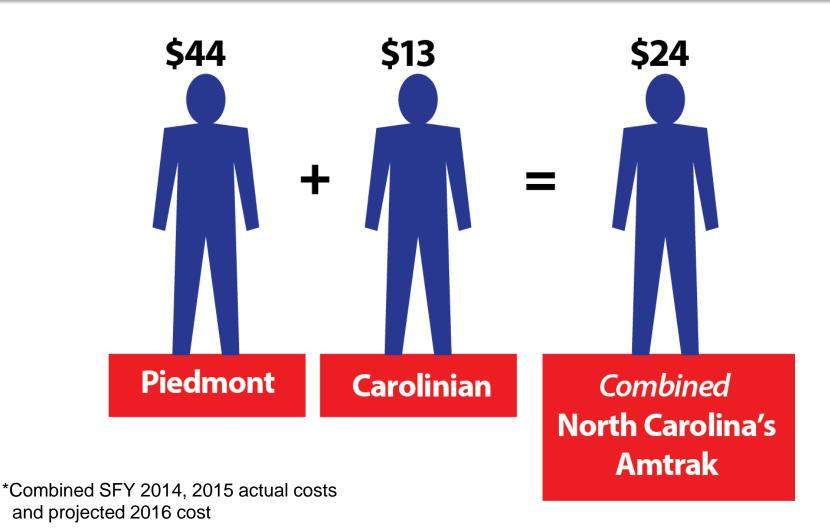


How North Carolina's Amtrak Compared to Other State-supported Trains in 2014

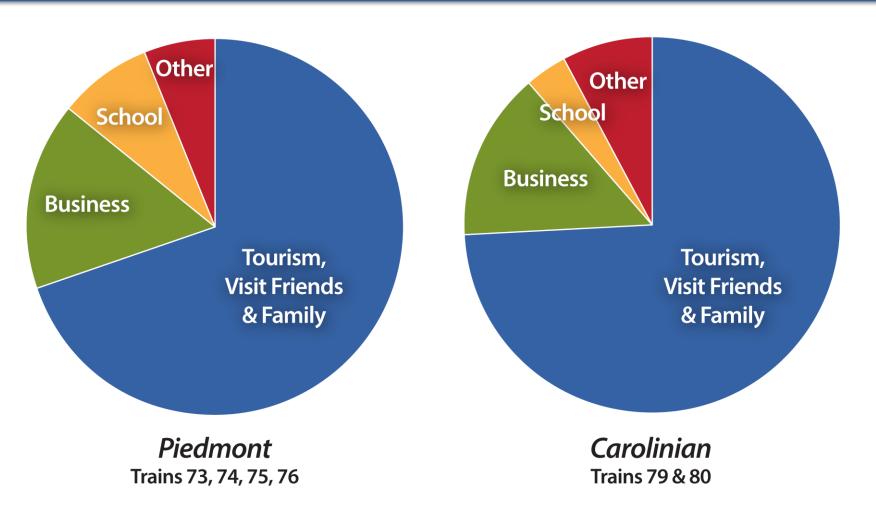
Cost recovery data based on FFY Revenues and Expenses as reported by Amtrak September 2014 for 29 State-Supported Routes.



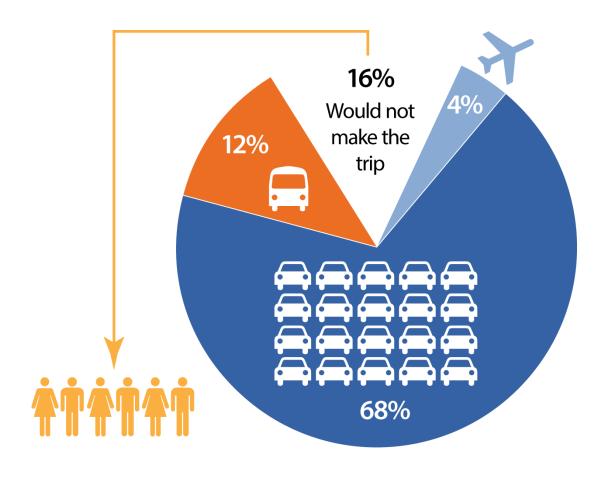
State Subsidy per Passenger – 3 year average*



Passenger Trip Purposes



In-State Travel Alternatives Preferences



Marketing North Carolina's Amtrak

- Promotions target key groups, increase ridership in lowerperforming time slots: mid-week + Saturday, attract 1st time riders
- NCDOT Communications new ad agency on contract, analyzing data and developing media plan





North Carolina's

Marketing Goals-Build Ridership

Tap into large college student/senior population

Families, groups and tourism travel

Business and commuters

Utilize Social Media





North Carolina's Amtrak at Sporting Events and College Campuses



















Tables at Community Festivals and Events Staff, Volunteer Train Hosts, Station Attendants







- Southeast Alternative Fuels Conference (Raleigh)
- Historic Salisbury Tour of Homes
- Thomasville Rail Fan Appreciation Day
- Heart of Cary Downtown Harvest Festival
- Eastern Carolina Barbecue Throw Down (Rocky Mount)

- Lexington Barbecue Festival
- Hamlet Seaboard Festival
- Lionel Drop-In Event
- Whirligig Festival (Wilson)
- Go Triangle Golden Modes
- Neuse River Model Railroad Show (Raleigh)





World of Bluegrass – 154,000 attended Youth Stage Sponsor, Booth in Convention Center









81

ncdot.gov



Safety Outreach and Education at State Fair-35,000 Visitors

NC Train Host Association

Volunteer Train Hosts worked **7,800 hours in 2014** ...on board trains, at stations and events



Governor McCrory declared March 6 North Carolina "Train Host Day."



Thank You.

Paul Worley, CPM
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